



Mini Max LED

ORDERCODE 40364



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Congratulations!

You have bought a great, innovative product from Showtec.

The Showtec Mini Max LED White brings excitement to any venue. Whether you want simple plug-&-play action or a sophisticated DMX show, this product provides the effect you need.

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Thank you!



Showtec

Showtec Mini Max LED White™ Product Guide

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WARNING



CAUTION!

**Keep this device away from rain and moisture!
Unplug mains lead before opening the housing!**



**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY
BEFORE YOUR INITIAL START-UP!**

SAFETY INSTRUCTIONS

Every person involved with the installation, operation and maintenance of this device have to:

- be qualified
- follow the instructions of this manual



**CAUTION! Be careful with your operations.
With a dangerous voltage you can suffer
a dangerous electric shock when touching the wires!**



Before your initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the device.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

This device contains no user-serviceable parts. Refer servicing to qualified technicians only.

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

- Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution!
- Never remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.
- Never leave any cables lying around.
- Do not insert objects into air vents.
- Do not connect this device to a dimmerpack.

Never lift the fixture by holding it at the projector-head, as the mechanics may be damaged. Always hold the fixture at the transport handles.

- Never look directly into the light source.
- Do not switch the device on and off in short intervals, as this would reduce the system's life.
- Do not shake the device. Avoid brute force when installing or operating the device.
- Only use device indoor, avoid contact with water or other liquids.
- Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.
- Avoid flames and do not put close to flammable liquids or gases.
- Always keep case closed while operating.
- Always allow free air space of at least 50 cm around the unit for ventilation.
- Always disconnect power from the mains, when device is not used or before cleaning! Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.
- Make sure that the device is not exposed to extreme heat, moisture or dust.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power-cord is never crimped or damaged. Check the device and the power-cord from time to time.

- If the lens is obviously damaged, it has to be replaced. So that its functions are not impaired, due to cracks or deep scratches.
- If device is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- If your Showtec device fails to work properly, discontinue use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Showtec dealer for service.
- For adult use only. Movinghead must be installed out of the reach of children. Never leave the unit running unattended.
- For replacement use fuses of same type and rating only.
- This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.
- During the initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- **WARRANTY:** Till one year after date of purchase.



OPERATING DETERMINATIONS

This device is not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.

The minimum distance between light-output and the illuminated surface must be more than 0.5 meter.

If this device is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.

Any other operation may lead to dangers like short-circuit, burns, electric shock, lamp explosion, crash etc.

You endanger your own safety and the safety of others!

Rigging

Please follow the European and national guidelines concerning rigging, trussing and all other safety issues.

Do not attempt the installation yourself !

Always let the installation be carried out by an authorized dealer !

Procedure:

- If the projector is lowered from the ceiling or high joists, professional trussing systems have to be used.
- Use a clamp to mount the projector, with the mounting-bracket, to the trussing system.
- The projector must never be fixed swinging freely in the room.
- The installation must always be secured with a safety attachment, e.g. an appropriate safety net or safety-cable.
- When rigging, derigging or servicing the projector, always make sure, that the area below the installation place is blocked and staying in the area is forbidden.

The Mini Max LED White can be placed on a flat stage floor or mounted to any kind of truss by a clamp.

Mounting a clamp to the underside of the MiniMax moving head

1. Bolt a clamp to the included bracket with a grade 8.8 (minimum) M12 bolt and locknut, or as recommended by the clamp manufacturer, through the 13 mm hole in the bracket.
2. Align the bracket with the keyholes in the base. Insert both locking pins into the holes and turn both Levers a full 1/4 turn clockwise to lock. The fasteners are locked only when turned fully clockwise.



Improper installation can cause serious damage to people and property !

Connection with the mains

Connect the device to the mains with the power-plug.

Always pay attention, that the right color cable is connected to the right place.

International	EU Cable	UK Cable	US Cable	Pin
L	BROWN	RED	YELLOW/COPPER	FASE
N	BLUE	BLACK	SILVER	NUL
	YELLOW/GREEN	GREEN	GREEN	EARTH

Make sure that the device is always connected properly to the earth!

Description of the device

Features

The Showtec Mini Max LED White is a LED moving-head with high output and great effects.

- 36x 1W LEDs (30x White, 6x Amber)
- DMX-control via standard DMX-controller
- 10 DMX-control channels required
- Strobe-effect with adjustable speed (1 - 10 flashes/sec.)
- Beam Angle 9°
- 16-bit resolution
- Amber/White color mixing
- Dimmer 0-100%
- Music-controlled
- Master/Slave function
- Stand alone function
- Pan 0° -- 540°
- Tilt 0° -- 230°

NOTE: Knowledge of DMX is required to fully utilize this unit.

DMX Channel Summary

DMX Mode	Channel	Description
	1	Pan
	2	Tilt
	3	Pan/Tilt Speed
	4	White
	5	Amber
	6	White/Amber Control Mode
	7	Dimmer
	8	Strobe / Auto Speed
	9	Pan Fine
	10	Tilt Fine

Overview



1) Lens

2) LCD Display + Menu Buttons

Fig. 1

Backside



Fig. 2

- 3)** DMX signal connector (IN)
- 4)** Powercable
- 5)** ON/OFF
- 6)** DMX signal connector (OUT)

Installation

Remove all packing materials from the Mini Max LED White. Check that all foam and plastic padding is removed. **Always disconnect from electric mains power supply before cleaning or servicing. Damages caused by non-observance are not subject to warranty.**

Set Up and Operation

Follow the directions below, as they pertain to your preferred operation mode.

Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 120V specification product on 230V power, or vice versa.

Occupation of the XLR-connection:

**DMX-OUTPUT
XLR mounting-socket:**



**DMX-input
XLR mounting-plug**



- 1 - Ground
- 2 - Signal (-)
- 3 - Signal (+)
- 4 - Free
- 5 - Free

The transformation of the controller line of 3 pins and 5 pins (plug and socket)

5-Pins canon (socket)
Pin 1 : GND(screen)
Pin 2 : Signal (-)
Pin 3 : Signal (+)
Pin 4 : N/C
Pin 5 : N/C

3-Pins canon (plug)
Pin 1 : GND(screen)
Pin 2 : Signal (-)
Pin 3 : Signal (+)

3-Pins canon (socket)
Pin 1 : GND(screen)
Pin 2 : Signal (-)
Pin 3 : Signal (+)

5-Pins canon (plug)
Pin 1 : GND(screen)
Pin 2 : Signal (-)
Pin 3 : Signal (+)
Pin 4 : N/C
Pin 5 : N/C

Fixture Linking

You will need a serial data link to run light shows of one or more fixtures using a DMX-512 controller or to run synchronized shows on two or more fixtures set to a master/slave operating mode. The combined number of channels required by all the fixtures on a serial data link determines the number of fixtures the data link can support.

The Mini Max LED White uses 10 channels.

Important: Fixtures on a serial data link must be daisy chained in one single line. To comply with the EIA-485 standard no more than 32 devices should be connected on one data link.
Connecting more than 32 fixtures on one serial data link without the use of a DMX optically isolated splitter may result in deterioration of the digital DMX signal.

Maximum recommended serial data link distance: 500 meters

Maximum recommended number of Mini Maxs on a serial data link: 32 fixtures

Data Cabling

To link fixtures together you must obtain data cables. You can purchase DAP Audio certified DMX cables directly from a dealer/distributor or construct your own cable. If you choose to create your own cable please use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

DAP Audio Certified DMX Data Cables

- DAP Audio Basic microphone cable for allround use. bal. XLR/M 3 p. > XLR/F 3 p.
Ordercode FL01150 (1,5m.), FL013 (3m.), FL016 (6m.), FL0110 (10m.), FL0115 (15m.), FL0120 (20m.).
- DAP Audio cable for the demanding user with exceptional audio-qualities and connector made by Neutrik®. **Ordercode** FL71150 (1,5m.), FL713 (3m.), FL716 (6m.), FL7110 (10m.).



One Mini Max LED White

1. Fasten the moving head onto firm trussing (Use a proper clamp fastened onto the Mini Max LED White). Leave at least 1 meter on all sides for air circulation.
2. Plug one end of the electric mains power cord into the IEC socket on the unit. Then plug the other end of the cord into a proper electric power supply socket.
3. To set the program to be played, see page 9 for the menu settings

Multiple Mini Maxs LED White

1. Fasten the effect light onto firm trussing (Use a proper clamp fastened onto the Mini Max LED White). Leave at least 1 meter on all sides for air circulation.
2. Use a 3-p XLR cable to connect the Mini Max LED White and other devices.
3. Link the units as shown in (figure 3), Connect a DMX signal cable from the first unit's DMX "out" socket to the second unit's "in" socket. Repeat this process to link the second, third, and fourth units.
4. Supply electric power: Plug electric mains power cords into each unit's IEC socket, then plug the other end of the mains power cord into proper electric power supply sockets, starting with the first unit. Do not supply power before the whole system is set up and connected properly.

Multiple Mini Max LED White Set Up

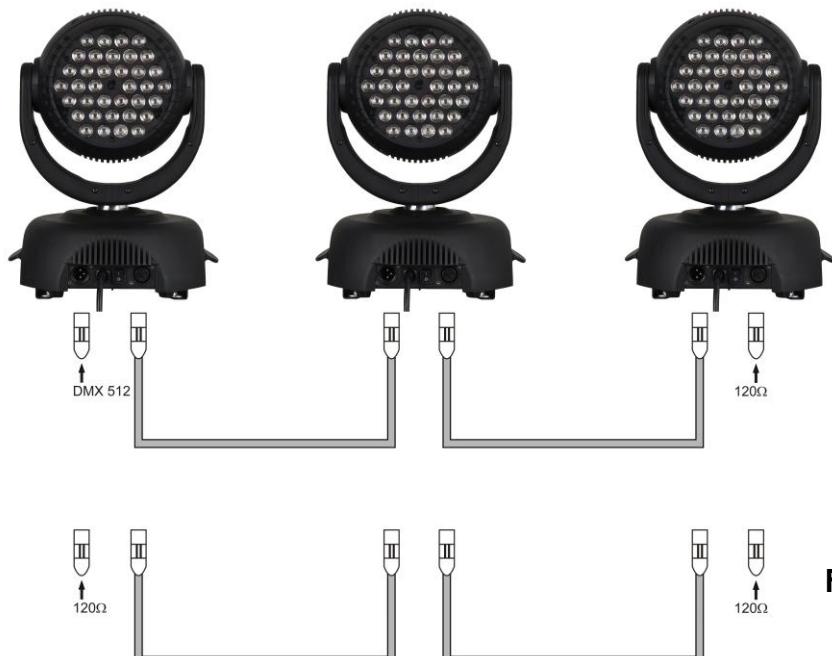
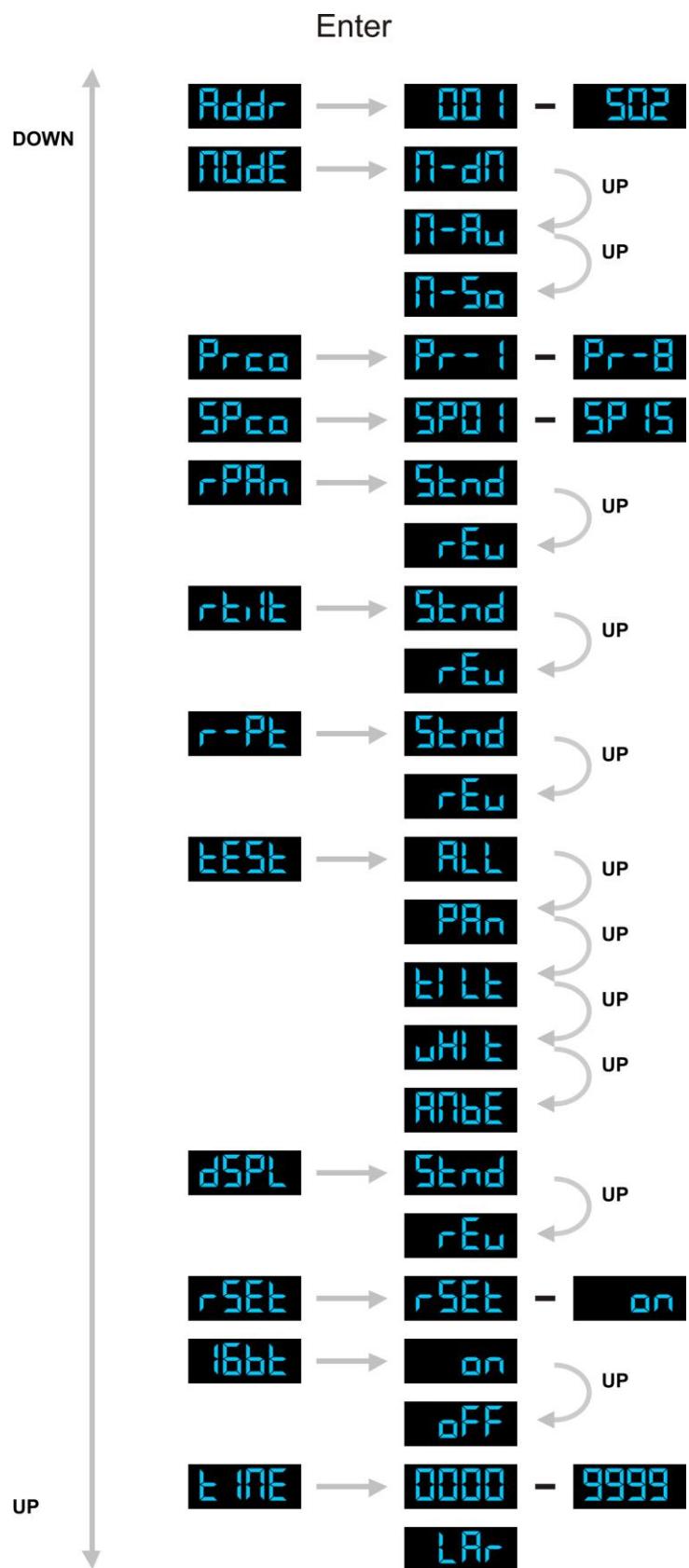


Fig. 3

Note : Link all cables before connecting electric power

MENU OVERVIEW



Press the UP/DOWN buttons to scroll through the 12 main menus:

Addr DMX 512 Address

Node Mode menu

Pro Built-in Programs

SPco Auto Speed

Pan Pan menu

Tilt Tilt menu

P-T Pan/Tilt Channel Flop menu

Test Test menu

dspl Display menu

rSet Reset menu.

16bit 16-bit menu

Time Time menu

DMX 512 Address

Addr → **001 - 502**

When you press SET in menu DMX 512 address to set the DMX address.
You can choose your DMX address between 001-502.

Mode menu

Node → **A-dm** → **A-Au** → **A-Sa**

DMX Mode
Auto Mode
Sound-active Mode

When you press ENTER in Mode menu, you can choose 3 main modes

Built-in Programs

Pro → **Pr-1 - Pr-8**

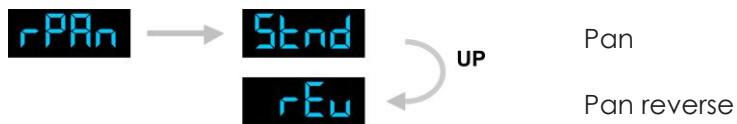
When you press ENTER in this menu, you can choose 8 built-in programs.
Pr-1 to Pr-4 are Switch programs.
Pr-5 to Pr-8 are Fade programs.

Auto Speed

SPco → **SP01 - SP15**

When you press ENTER in this menu, you can choose the Auto Speed from 0,1 – 10 seconds.

Pan menu



Tilt menu



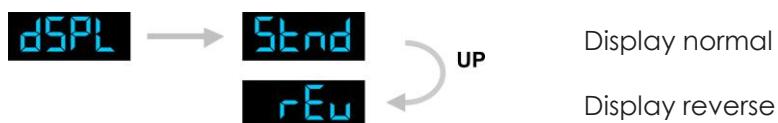
Pan/Tilt Channel Flop menu



Test menu



Display menu



Reset menu



16-bit menu



Time menu



DMX Protocol

Channel 1 - Horizontal movement (Pan)

Push the slider up, in order to move head horizontally (PAN).

Gradual head adjustment from one end of the slider to the other (0-255, 128-center).

The head can be turned by 540° and stopped at any position you wish.

Channel 2 - Vertical movement (Tilt)

Push the slider, up in order to move head vertically (TILT).

Gradual head adjustment from one end of the slider to the other (0-255, 128-center).

The head can be turned by 230° and stopped at any position you wish.

Channel 3 – Pan/Tilt Speed

0-255	From Max Speed (0) to Min. Speed (255) in vector mode
-------	---

Channel 4 – White

0-255	Gradual adjustment White from 0 – 100%
-------	--

Channel 5 – Amber

0-255	Gradual adjustment Amber from 0 – 100%
-------	--

Channel 6 – White/Amber, Auto Mode, Sound-active

0-24	White/Amber
24-49	Built-in Auto Program 1
50-74	Built-in Auto Program 2
75-99	Built-in Auto Program 3
100-124	Built-in Auto Program 4
124-149	Built-in Auto Program 5 (No Pan & Tilt)
150-174	Built-in Auto Program 6 (No Pan & Tilt)
175-199	Built-in Auto Program 7 (No Pan & Tilt)
200-224	Built-in Auto Program 8 (No Pan & Tilt)
225-250	Sound-active Program

When CH6 is 0-24: **CH4 White, CH5 Amber, CH7 Master Dimmer, CH8 Strobe.**

When CH6 is 25-224: **CH8 Auto Speed.**

When CH6 is 225-255: **CH1, CH2, CH3, CH4, CH5, CH6, CH7 and CH8 are invalid.**

Channel 7 – Master Dimmer (When CH6 = 0 - 24)

0-255	From black to brightest
-------	-------------------------

Channel 8 – Strobe (When CH6 = 0 - 24)

0-7	Full On
8-255	Strobe effect, from slow to fast (0-10 flashes/sec.)

Channel 8 – Auto Speed (When CH6 = 25 - 224)

0-255	Auto Speed from fast to slow
-------	------------------------------

Channel 9 – Pan fine 16 bit (2,4°)

Channel 10 – Tilt fine 16 bit (2,4°)

NOTE: **CH4, CH5 and CH7 are dimmer channels.**
When CH4, CH5 or CH7 = 0 there is no output

The MiniMax can be operated with a controller in **DMX**, **Sound Active** or without the controller in **Stand-alone Mode**.

Control Panel

When the indicator light is on, means the MiniMax is working.

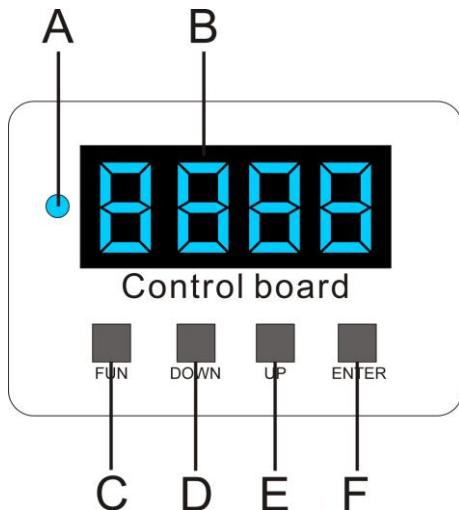


Fig. 5

- A. LED
- B. Display
- C. [FUN] Button
- D. Down Button
- E. Up Button
- F. [ENTER] Button

Control Mode

The fixtures are individually addressed **001** - **502** on a data-link and connected to the controller. The fixtures respond to the DMX signal from the controller. (When you select the DMX address and save it, the controller will display the saved DMX address the next time.)

DMX Addressing

The control panel on the front side of the base allows you to assign the DMX fixture address, which is the first channel from which the MiniMax will respond to the controller.

Please note when you use the controller, the unit has **10** channels.

When using multiple MiniMax's, make sure you set the DMX addresses right.

Therefore, the DMX address of the first MiniMax should be **1(A001)**; the DMX address of the second MiniMax should be **1+10=11 (A011)**; the DMX address of the third MiniMax should be **11+10=21(A021)**, etc.

Please, be sure that you don't have any overlapping channels in order to control each MiniMax correctly.

If two or more MiniMax's are addressed similarly, they will work similarly.

For address settings, please refer to the instructions under "Addressing"

Controlling:

After having addressed all MiniMax fixtures, you may now start operating these via your lighting controller.

Note: After switching on, the MiniMax will automatically detect whether DMX 512 data is received or not. If there is no data received at the DMX-input, the "LED" on the control panel will not flash.

The problem may be:

- The XLR cable from the controller is not connected with the input of the MiniMax.
- The controller is switched off or defective, the cable or connector is defective, or the signal wires are swapped in the input connector.

Note: It's necessary to insert a XLR termination plug (with 120 Ohm) in the last fixture in order to ensure proper transmission on the DMX data link.

DMX 512 Channel settings for Mini Max LED White

Light No.	Start Channels
1	A001
2	A011
3	A021
4	A031
5	A041
6	A051
7	A061
8	A071
9	A081
10	A091
11	A101
12	A111
13	A121
14	A131
15	A141
16	A151
17	A161
18	A171
19	A181
20	A191
21	A201
22	A211
23	A221
24	A231
25	A241
26	A251
27	A261
28	A271
29	A281
30	A291
31	A301
32	A311
33	A321
34	A331
35	A341
36	A351
37	A361
38	A371
39	A381
40	A391

Light No.	Start Channels
41	A401
42	A411
43	A421
44	A431
45	A441
46	A451
47	A461
48	A471
49	A481
50	A491
51	A501
52	A511
53	A521
54	A531
55	A541
56	A551
57	A561
58	A571
59	A581
60	A591
61	A601
62	A611
63	A621
64	A631
65	A641
66	A651
67	A661
68	A671
69	A681
70	A691
71	A701
72	A711
73	A721
74	A731
75	A741
76	A751
77	A761
78	A771
79	A781
80	A791

Channel Settings

40362 Mini Max LED RGB Fixture-settings											
Channel	1	2	3	4	5	6	7	8	9	10	
Function	Pan	Tilt	Scan speed Adjust	White	Amber	White/Amber Control Mode	Dimmer	Ch6 0-24 Strobe	Ch6 25-255 Auto Speed	Pan Fine	Tilt Fine
255	Clockwise 540° rotate 		255 Fast 	255 	255 	225-255 Audio Pro 200-224 Auto Pro 8 175-199 Auto Pro 7 150-174 Auto Pro 6 125-149 Auto Pro 5 100-124 Auto Pro 4 75-99 Auto Pro 3 50-74 Auto Pro 2 25-49 Auto Pro 1 0-24 RGB	255 Open 	255 Fast 	255 Slow 	Clockwise 540° rotate 	
128			0 Slow 	0 	0 		0 Closed 	8 Slow 	7 Full On 	0 	0
0			0 Slow 	0 	0 		0 	0 	0 Fast 	0 	0

Maintenance

The Showtec Mini Max LED White requires almost no maintenance. However, you should keep the unit clean.

Otherwise, the fixture's light-output will be significantly reduced. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Do not use alcohol or solvents.

The lens will require weekly cleaning, as smoke-fluid tends to build up residues, reducing the light-output very quickly.

Please clean internal components once a year with a light brush and vacuum cleaner.

Keep connections clean. Disconnect electric power, and then wipe the connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

The operator has to make sure that safety-relating and machine-technical installations are to be inspected by an expert after every four years in the course of an acceptance test.

The operator has to make sure that safety-relating and machine-technical installations are to be inspected by a skilled person once a year.

The following points have to be considered during the inspection:

1. All screws used for installing the device or parts of the device have to be tightly connected and must not be corroded.
2. There may not be any deformations on housings, fixations and installation spots.
3. Mechanically moving parts like axles, eyes and others may not show any traces of wearing.
4. The electric power supply cables must not show any damages or material fatigue.

Troubleshooting

No Light, No Movement - All Products

This troubleshooting guide is meant to help solve simple problems. If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

If the light effect does not operate properly, refer servicing to a technician.

Response: Suspect two potential problem areas: the power supply, the LEDs.

1. Power supply. Check that the unit is plugged into an appropriate power supply.
2. The LEDs. Return the Mini Max LED White to your Showtec dealer.

No Response to DMX

Response: Suspect the DMX cable or connectors, a controller malfunction, a light effect DMX card malfunction.

1. Check the DMX cable: Unplug the unit; change the DMX cable; then reconnect to electrical power.
Try your DMX control again.
2. Determine whether the controller or light effect is at fault. Does the controller operate properly with other DMX products ? If not, take the controller in for repair. If so, take the DMX cable and the light effect to a qualified technician.

Product Specification

Model: Showtec Mini Max LED White

Voltage: 230V-50Hz (CE)

Power: 160W

Dimensions (incl. handles): 260x220x350mm (LxWxH)

Weight: 5,68 kg

Operation and Programming

Signal pin OUT : pin 1 earth, pin 2 (-), pin 3 (+)

Set Up and Addressing : LED control panel

DMX Channels: 10

Signal input 3-pin XLR male

Signal output 3-pin XLR female

Control: Automatic and DMX

Electro-mechanical effects

Beam Angle: 9°

Dimmer : 0 – 100% linear dimmer

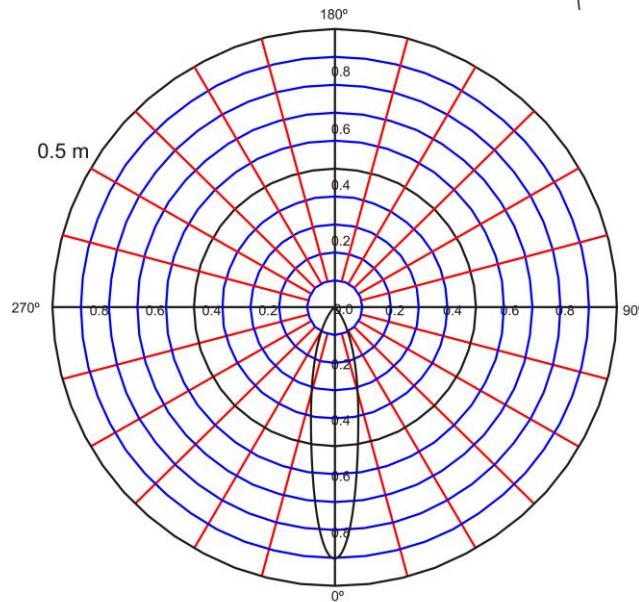
Strobe-effect with variable speed (1 flash -- 10 flashes/sec

DMX-control via standard DMX-controller

Pan 0° -- 540°

Tilt 0° -- 230°

Cooling: Fan cooled



Testing Circumstances

Installation position: horizontal

Max. Luminous intensity 902.96 cd

Luminous Flux: 285.84 lm

Luminous Efficiency: 4.8 lm/w

Design and product specifications are subject to change without prior notice.



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